WHAT IS CLAIMED IS:

1. A communication control method used in a cellular mobile communication system in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating radio wave beams to the mobile stations, said method comprising the steps of:

controlling first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam.

2. The communication control method as claimed in claim 1, said method comprising the steps of:

predetermining other base stations for which interference caused by radio wave beams radiated by a base station should be considered;

notifying said base station of directions and radiation timing of radio wave beams radiated by said other base stations;

controlling said base station on the basis of said directions and radiation timing such that timing at which said base station radiates radio wave beams is different from timing at which said other base stations radiate radio wave beams which may cause interference with radio wave beams radiated by said base station.

3. The communication control method as claimed in claim 2, wherein said each of other base stations is an adjacent base station to said base station.

4. The communication control method as claimed in claim 1, said method comprising the step of:

when a base station which communicates with a mobile station switches a radiating radio wave beam from a first radio wave beam to a second radio wave beam as said mobile station moves, controlling said base station such that timing at which said first radio wave beam is radiated is different from timing at which said second radio wave beam is radiated.

5. The communication control method as claimed in claim 1, said method comprising the step of:

when a radio wave beam which is radiated by a base station covers a plurality of mobile stations, controlling said base station such that timing at which said radio wave beam is radiated is different for each mobile station.

6. The communication control method as claimed in claim 1, said method comprising the step of:

controlling timing of a radio wave beam at which a base station radiates such that said radio wave beam is radiated for a mobile station in a plurality of time slots at predetermined intervals.

7. The communication control method as claimed in claim 6, wherein the number of said time slots is determined on the bases of communication state in said base station.

8. The communication control method as claimed in claim 1, said method comprising the steps of:

when a received level in a mobile station for a signal by a radio wave beam come from a base station directly is lowered, said mobile station directing a radio wave beam to a direction from which another radio wave beam comes, said another radio wave beam having the best receiving quality among other radio wave beams arriving at said mobile station from said base station, and said mobile station requesting allocation of a time slot for said another radio wave beam; and

said base station allocating said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said

another radio wave beam.

9. The communication control method as claimed in claim 1, said method comprising the steps of:

a mobile station receiving a signal by a first radio wave beam from a direction of a base station,

said mobile station directing a radio wave beam to a direction from which a second radio wave beam comes, said second radio wave beam being radiated by said base station and arriving at said mobile station;

said mobile station requesting allocation of a time slot for said second radio wave beam;

said base station allocating said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said second radio wave beam; and

said mobile station combining a received signal by said first radio wave beam and a received signal by said second radio wave beam.

10. The communication control method as claimed in claim 1, said method comprising the steps of:

when a received level in a base station for a signal by a radio wave beam come from direction of a mobile station is lowered, said base station directing a radio wave beam to a direction

from which another radio wave beam comes to keep a path, said another radio wave beam having the best receiving quality among other radio wave beams arriving at said base station from said mobile station.

11. The communication control method as claimed in claim 1, said method comprising the steps of:

when a received level in a mobile station for a signal by a radio wave beam come from a base station directly is lowered, said mobile station selecting another radio wave beam, said another radio wave beam having the best receiving quality among other radio wave beams arriving at said mobile station from said base station, and said mobile station requesting allocation of a time slot for said another radio wave beam; and

said base station allocating said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said another radio wave beam.

12. The communication control method as claimed in claim 1, said method comprising the steps of:

a mobile station receiving a signal by a first radio wave beam from a direction of a base station,

said mobile station requesting allocation of a time slot for a second radio wave beam, said second radio wave beam being radiated by said base station and arriving at said mobile station;

said base station allocating said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said second radio wave beam; and

said mobile station combining a received signal by said first radio wave beam and a received signal by said second radio wave beam.

13. A communication control apparatus in a cellular mobile communication system which controls communication between each base station and a mobile station in which each base station can radiate radio wave beams to a plurality of directions and each base station communicates with mobile stations by using the same frequency by radiating a radio wave beam to the mobile station, said apparatus comprising:

a timing control part for controlling first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base station radiates a second radio wave beam which may cause interference with said first radio wave beam.

14. A mobile station in a cellular mobile communication system in which each base station

radiates a radio wave beam to a mobile station and each base station communicates with a mobile station by using the same frequency, said mobile station comprising:

a part for, when a received level in a mobile station for a signal by a radio wave beam coming from a base station directly is lowered, directing a radio wave beam to a direction from which another radio wave beam comes, and requesting allocation of a time slot for said another radio wave beam, said another radio wave beam having the best receiving quality among other radio wave beams arriving at said mobile station from said base station;

wherein said base station allocates said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said another radio wave beam.

15. A mobile station in a cellular mobile communication system in which each base station radiates a radio wave beam to a mobile station and each base station communicates with a mobile station by using the same frequency, said mobile station comprising:

a part for receiving a signal by a first radio wave beam from a direction of a base station, and directing a radio wave beam to a direction from which a second radio wave beam comes, said second radio wave beam being radiated by said base station and arriving at said mobile station;

a part for requesting allocation of a time slot for said second radio wave beam;

a part for combining a received signal by said first radio wave beam and a received signal by said second radio wave beam after said base station allocates said time slot such that said time slot is different from timing at which other base stations radiate radio wave beams which may cause interference with said second radio wave beam.